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EMU FISCAL INDICATORS: A MISLEADING COMPASS?

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EMU FISCAL INDICATORS: A MISLEADING COMPASS?

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Summary

The effectiveness of any device for fiscal discipline (either rule or market based) crucially depends on the indicators it refers to. This paper assesses the indicators adopted for EMU fiscal rules with respect to their relevance to the underlying target of fiscal soundness and to the adequacy of the underlying statistical framework in providing conditions for enforcement.

EMU fiscal rules rely on compliance with short-term targets for traditional indicators of annual deficit and outstanding debt. With respect to fiscal soundness, in principle, forward-looking indicators would have been preferable. However, as these indicators rely on strong assumptions, they do not lend themselves to be adopted for the enforcement of formal rules, especially in a multinational context where moral hazard issues gain prominence.

The paper notes that EMU's debt indicator (general government gross consolidated financial liabilities at face value) allows targets to be achieved via operations which do not improve fiscal sustainability and tends to underestimate overall outstanding liabilities. Some evidence of the extent to which this has been the case in EMU member states in recent years is provided.

Concerning enforcement, the paper argues that EMU's deficit indicator (general government net borrowing) cannot be timely monitored, allows too much room for discretion and is subject to relevant revisions. Its shortcomings are confirmed by the analysis of some recent episodes, whereby large deviations from policy targets have been detected with significant delay and deficit figures have undergone large upward revisions.

The shortcomings of EMU's indicators concern the use to which they are put in the European context and do not imply any weaknesses of the European System of Integrated Economic Accounts (ESA95) in providing information suitable to economic analysis.

The paper acknowledges that any single indicator can be distorted when used as policy target. It argues that the weaknesses of EMU's deficit indicator would be much reduced if it were analysed together with the debt one rather than separately as it is currently done. The analysis of both deficit and debt should take place within an integrated statistical framework relying on a wider range of indicators.

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"In general, countries characterised by a relatively high degree of fiscal transparency have exhibited greater fiscal discipline and, in many instances, have been able to achieve a more robust economic performance …" (Kopits and Craig, 1998, 2).

1. INTRODUCTION

The pros and cons of fiscal rules have long been debated.[1] On the one hand, fiscal rules are seen as a prevention device against opportunistic behaviour by policy makers and sharp discontinuities in public policies. On the other hand, rules are seen as a source of unnecessary rigidity in the budgetary process leading to sub-optimal outcomes.

In the European context, fiscal rules have been adopted mainly to ensure the soundness and the sustainability of public finances. Discipline-inducing market mechanisms were not trusted to be sufficient. The rules introduced to accompany EMU, which were effective in ensuring fiscal consolidation up to 1997, have been extensively criticised in recent years. Moreover, their enforcement has been meeting several problems: the 3 per cent of GDP deficit threshold has been repeatedly violated and the implementation of monitoring and sanctioning procedures has been modified according to countries' pressures.

Whether the Treaty and the Pact remain the cornerstone of fiscal discipline in EMU or market mechanisms are left the only constraint to budgetary imbalances, the quality of the indicators remains a crucial issue.

This paper assesses the indicators adopted in EMU with respect to their relevance to fiscal soundness and to the adequacy of the underlying statistical framework in providing necessary conditions for enforcement.

EMU fiscal rules rely on compliance with short-term targets for traditional indicators of annual deficit and outstanding debt. Continuous compliance with prudent targets for these indicators is expected to ensure long-term fiscal sustainability. Deficit and debt are the main focus of the yearly medium-term Stability programmes and of the bi-annual fiscal reporting to the European Commission. They are also used as the basis for long-term projections by the European Commission or by ad-hoc working groups.

Forward-looking indicators would be more appropriate for assessing fiscal sustainability. However, as these indicators rely on strong assumptions they do not lend themselves to be adopted for the enforcement of formal rules, especially in a multinational context where moral hazard issues gain prominence.

[1] See Kopits and Symansky (1998), Kopits (2001) and Banca d'Italia (2001).

Beyond this general issue, the paper notes that EMU's debt indicator (general government gross consolidated financial liabilities at face value) allows targets to be achieved via operations which do not improve fiscal sustainability and tends to underestimate overall outstanding liabilities. Some evidence of the extent to which this has been the case in EMU member states in recent years is provided.

Concerning enforcement the paper argues that EMU's deficit indicator (general government net borrowing as defined in ESA95[2]) cannot be timely monitored, allows too much room for discretion and is subject to relevant revisions. Its shortcomings are confirmed by the analysis of some recent episodes, whereby large deviations from policy targets have been detected with significant delay and deficit figures have undergone large upward revisions.

Continuous within-year monitoring is necessary from the point of view of both the member state trying to comply with the rules and the agency (the European Commission) trying to detect early evidence of deviations from targets. High margins for discretion and frequent and sizeable revisions negatively affect both the viability of control of short-term developments as a means to ensure long-term sustainability and the reliability of the indicators as the basis for long-term analysis.

The shortcomings of EMU's indicators concern the use to which they are put in the European context and do not imply any weaknesses of the European System of Accounts (ESA95) in providing information suitable to economic analysis.

The paper acknowledges that all fiscal indicators can be distorted when used as policy targets and recognises that simply replacing current indicators by new ones would not solve the problem. It rather argues that the weaknesses of EMU's deficit indicator would be much reduced if it were analysed together with the debt one rather than separately as it is currently done. It also suggests that the analysis of both deficit and debt should take place within an integrated statistical framework relying on a wider range of indicators in order to increase its relevance for fiscal soundness.

These lines of arguments are supported by evidence coming from three case studies of abrupt and significant deficit revisions occurred in Portugal and Italy in 2002 and in Greece in 2004. In all three cases early signals of unusual developments in public finances could have been detected by looking at the consistency between deficit and debt figures.

The paper is structured as follows. Section 2 briefly reviews EMU's deficit and debt indicators. Sections 3 and 4 assess these indicators with respect to the objectives of ensuring the medium to long-term sustainability of public finances and of enforcing the rules. Section 5 argues that monitoring of deficit developments would be more effective if supported by the analysis of debt dynamics and examines the three case studies providing evidence in support of this view. Section 6 further develops the argument and suggests that the analysis of EMU fiscal indicators would be more relevant for fiscal sustainability if it were carried out within a multifaceted statistical framework. Section 7 concludes.

[2] EAS95 is the most recent version of the European System of Integrated Economic Accounts (Eurostat, 1979 and 1995).

2. EMU FISCAL INDICATORS

The fiscal framework of EMU was developed gradually. The Treaty of Maastricht in 1992 set the fiscal criteria to be met for joining the Monetary Union. The primary objective of the Treaty and the Pact was to keep a sound fiscal stance in order to preserve stable monetary and financial conditions within the Union. The Stability and Growth Pact (SGP), adopted by the European Council in Amsterdam in June 1997, complemented the Treaty with a view to reconcile permanent restraint of deficit and debt levels with margins for fiscal stabilisation. The Pact also strengthened the monitoring procedures accompanying the quantitative rules.[3]

The design of EMU rules met a number of practical problems. Sustainability analysis has a forward-looking nature and should not be based on annual out-turns which only depict the current budgetary situation. The assessment of future developments can refer either to explicit medium-long term projections of traditional deficit and debt measures[4] or to summary indicators of these projections, such as the change in net worth.[5] However, both solutions rely on strong assumptions, which can always be debated, and can lead to results whose robustness has to be tested.

In general, summary indicators meet the same difficulties as straightforward long-term projections. Moreover, summary indicators of long-term projections are difficult to interpret and do not immediately translate into policy prescriptions.[6] Negative net worth signals that the present value budget constraint is not satisfied but does this mean that an immediate correction is needed? By contrast, positive net worth signals that the constraint is satisfied but says nothing about future developments in public finances and it may well be consistent with a situation whereby a sharp and significant increase in deficit and debt is later compensated by a corresponding improvement. Would these developments be sustainable?

These problems made it difficult to consider the adoption of sophisticated sustainability indicators as a reference for formal rules in the context of EMU. The asymmetry between the monetary regime, with the single currency and a single monetary authority, and the political landscape, lacking an authority of federal rank, gave prominence to moral hazard issues. Against this background, European policy makers took a cautious approach and selected relatively simple numerical rules and simple fiscal indicators.

Article 104 of the Treaty and the annexed Protocol on excessive deficits lay out the criteria for assessing budgetary positions: (i) general government deficit must not exceed 3 per cent of GDP (safe for exceptional circumstances, for a limited period, and for a limited amount);[7] (ii) general

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3 The rationale for EMU rules is discussed, e.g., in Buti and Sapir (1998) and in Brunila, Buti and Franco (2002).

4 See Franco and Marino (2004) and the references therein.

5 Some authors have prescribed to resort to either "economic deficit" (Kotlikoff, 1984) or to "government net worth" (Buiter, 1983). These solutions would require, inter alia, the inclusion of pensions in fiscal accounts when obligations are incurred rather than when the actual expenditure is made. For a survey see Towe (1991) and Blejer and Cheasty (1991); for a critique see Mackenzie (1989). Both Buiter (1985) and Blanchard *et al.* (1990) suggest summary indicators of the outcomes of long-term projections. Summary indicators of the fiscal burden that current generations are placing on future generations are provided by generational accounts (Auerbach *et al.*, 1991, p. 55).

6 This problem is especially relevant for generational accounting. For a critical assessment see, e.g., Buiter (1995), Hagemann and John (1995), Haveman (1994) and IMF (1996).

7 The SGP has introduced a medium-term target of a budgetary position of close to balance or in surplus and has specified the interpretation of the Treaty's provisions allowing the annual deficit ratio to exceed the 3 per cent limit

government debt must not exceed 60 per cent of GDP or, if above this limit, it must be decreasing sufficiently and approaching the limit at a satisfactory pace.

As practical reasons forced the adoption of traditional deficit and debt indicators as opposed to more forward-looking measures, tighter ceilings than otherwise necessary were chosen for yearly outcomes.[8] While the ceiling to the deficit ratio is consistent with Domar's (1944) requirement for sustainability, the debt ceiling is intended to avoid convergence to high levels of debt. The arbitrariness sometimes attributed to the choice of the actual thresholds appears to reflect ambiguities in the theory of fiscal sustainability rather than poor design of the rules.[9] The choice of a gross debt measure also appears to reflect the reasonable degree of prudence that is to be used in assessing solvency, given the unavoidable arbitrariness involved in the valuation of financial assets and of their degree of liquidity.

A common reference accounting framework for the two indicators was adopted. The deficit is defined as the ESA95 general government net borrowing. The debt is defined as gross financial liabilities at nominal (face) value consolidated between and within the sectors of general government. Although this is not the debt definition provided by ESA, the relevant financial instruments and the reference sectors are those specified within that framework. The European Statistical Office (Eurostat) oversees the correct implementation of definitions and the computational criteria adopted by national statistical institutes. It also releases explanatory notes concerning controversial issues.[10]

The choice of ESA as the relevant accounting framework for budgetary surveillance was due both to the appropriateness of national accounts for economic analysis and to the lack of any viable alternative. It was deemed unrealistic to define a new accounting framework to monitor public finances. The risk that a new framework would have been more permeable to politically motivated interpretations than ESA was probably also perceived.

While continuous compliance with short-term prudent targets for traditional indicators was taken as a means to ensure sustainability, the need for a forward-looking assessment of the budgetary situation was somehow taken into account by requiring the submission of multi-year programs including medium-long term projections. The internal consistency of the programs, their underlying

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under exceptional recessions and other circumstances which are not under government control and have a significant impact on public finances. Recessions implying a reduction of real GDP by more than 2 per cent are considered exceptional (milder recessions with real GDP decreasing by at least 0.75 per cent may also be considered exceptional, e.g. if abrupt and prolonged). The excess above the 3 per cent limit must be reabsorbed as soon as the exceptional circumstances are over. The amount by which the 3 per cent limit can be exceeded is left unspecified.

8 See Balassone and Franco (2000a and 2001).

9 The target was set close to the European average at the time of the Treaty. Lacking a fully specified "consensus" model of the economy it is impossible to estimate a maximum sustainable level of the debt (see, for example, Balassone and Franco, 2000a).

10 Definitions and computational criteria for the two indicators are collected in a guidebook (Eurostat, 2000).

assumption and, ultimately, attainability are also subject to scrutiny.[11] Long-term projections are getting increasingly important in the monitoring of budgetary trends.[12]

3. SOUNDNESS OF PUBLIC FINANCES

Fiscal soundness is the main objective of EMU rules. While the intuition is clear (a sound policy avoids bankruptcy), the analytical and operational definition of soundness is not straightforward: how is the equilibrium between unnecessary restraint and irresponsible excess to be defined? This difficulty is mirrored by the lengthy debate on the definition of fiscal sustainability.[13]

In the literature reference is often made to the present value budget constraint whereby financial liabilities (FL) must be equal to or smaller than the sum of: (a) assets (A); (b) the difference between the stock of accrued revenue yet to be cashed in and the stock of accrued expenditure yet to be paid (net other accounts, NOA); (c) the present value of the difference between future revenue (T, excluding those coming from the sale of assets) and expenditure (G, excluding those for the acquisition of assets);[14] (d) the present value of the difference between future changes in the value of assets and those in the value of liabilities:

$$(1) \qquad FL_t \leq A_t + NOA_t + [\Sigma_{t+1,\infty} T_i(1+r)^{t-i} - \Sigma_{t+1,\infty} G_i(1+r)^{t-i}] + \Sigma_{t+1,\infty} \Delta V_i(1+r)^{t-i}$$

Using equation (1) as a reference, EMU's deficit and debt indicators can be examined with respect to two set of issues: (a) comprehensiveness, i.e. issues related to terms in equation (1) which are overlooked; (b) measurement, i.e. issues related to the consistency of actual measures with their "theoretical" counterparts featuring in equation (1).

Comprehensiveness issues. – EMU fiscal indicators are measures of FL_t, for the debt, and of (T_t-G_t), for the deficit. Therefore EMU fiscal rules do not take into account: (a) government assets (A_t); (b) the stock of net other accounts (NOA_t, net assets/liabilities already accrued but not yet incorporated into financial instruments); (c) future revenue and expenditure flows; (d) future changes in valuations of assets and liabilities (ΔV).

By taking into account the government assets one would be estimating net debt (FL_t-A_t). While this indicator would represent a better benchmark for assessing fiscal sustainability, its measurement meets some difficulties. First, the degree of liquidity of government assets should be taken into account. Second, data on assets are often subject to significant uncertainty, especially those on non-

[11] EU member states must submit their medium-term budgetary targets to the European Commission in a standardised format (Stability Programmes and Convergence Programmes respectively for EMU and non-EMU countries). They must indicate the fiscal targets, the measures intended to allow their achievement and the underlying macroeconomic assumptions.

[12] See the Opinion of the Economic and Financial Committee, 27 June 2001, as endorsed by the Council. See also Economic Policy Committee (2001 and 2003).

[13] See Balassone and Franco (2000a) and the papers in Banca d'Italia (2000).

[14] Future revenue and expenditure are valued in accrual terms so that there is no need to consider explicitly future other accounts receivable and payable.

interest bearing assets. Third, there is an open issue concerning the proper valuation criterion: while using book values may lead to underestimating the assets, reference to market values would induce excessive volatility in the debt measure.

Sales of financial assets that leave unaffected government's net position can be used to reduce gross liabilities without improving the underlying sustainability conditions. In Italy a large privatisation programme undertaken over the 1990s contributed to the reduction of gross financial liabilities for almost 5 percentage points of GDP (the proceeds of privatisations almost entirely accrued in the second half of the decade, when the debt to GDP ratio declined by about 15 percentage points). In more recent years gross debt was kept in check also thanks to sales of real estate (almost one percent of GDP in 2002) and to reductions in the balances held by the Treasury on its bank accounts (about 0.6 per cent in 2003).

For the EU it can be estimated that privatisation proceeds amounted to over 0.5 per cent of GDP per year between 1994 and 2002. They were close to 1 per cent of GDP between 1997 and 1999. In Belgium privatisations significantly contributed to debt reduction until 1998. In Germany they averaged at around 1 per cent of GDP at the end of the 1990s. In Finland sales of shares in public corporations in the telecommunication sector amounted to 3 per cent of GDP in 1999, 1.5 in 2000 and 1.9 in 2002. In Ireland privatisation proceeds reached 5.5 per cent of GDP in 1999. A large privatisation programme was started in Greece at the turn of the century; revenue amounted to 3.3 per cent of GDP in 1999. Government's asset sales programmes were undertaken also in Austria, France and Portugal.

A more comprehensive picture of government net liabilities would be achieved by considering the stock of net other accounts (NOA_t). However, this solution would raise additional problems in terms of data availability. In particular, one would need accurate estimates of the stock of commercial debts and tax credits.[15]

Outstanding liabilities may be underestimated whenever there are net accrued liabilities not yet incorporated in financial instruments. This may abruptly affect EMU's debt indicator. In Italy the stock of tax credits reached significant levels in the first half of the 1990s (almost 4 per cent of GDP). They are currently estimated at less than half those levels. Settlement of past debts, mostly regarding the commercial debts of public institutions providing health care, have been consistently significant over the 1990s and in most recent years, falling just short of 0.5 per cent of GDP per year.

Overall, while a first best solution is not available, it may be useful to complement gross debt with other indicators: (a) a debt net of the most liquid assets (e.g. bank deposits) and of those other assets whose valuation is less problematic (e.g. performing loans); (b) a debt which also takes into account the stock of most relevant and easily measurable accrued liabilities (e.g. tax credits); (c) a measure of changes in net debt (valuation problems do not affect asset flows as much as stocks).

Concerning future revenue and expenditure ($\Sigma_{t+1,\infty}\ T_i(1+r)^{t-i} - \Sigma_{t+1,\infty}\ G_i(1+r)^{t-i}$), there are practical reasons to exclude the use of forward-looking indicators (see also Section 2). Nevertheless, there is a need to monitor measures which improve debt and deficit today at the expense of deficit increases tomorrow so as to avoid misleading interpretations of current budgetary outcomes. Recourse to this kind of measures has not been uncommon among EU member states. A typical example is interest

[15] On problems related to the measurement of net worth and its changes see Blejer and Cheasty (1991).

swap operations. Over the 1998-2003 period interest swaps significantly reduced the cumulated deficit in Austria (0.8 percentage points of GDP), Denmark (0.6 p.p.), Italy (0.6 p.p.) and Sweden (0.6 p.p.). Swap operations, averaging at 0.2 percentage points of GDP were carried out also in Belgium, Finland, Greece, Portugal and Spain.[16]

In 2002 the Italian Treasury undertook a major swap operation with Banca d'Italia concerning the Treasury bonds given to Banca d'Italia in 1993 to extinguish the overdraft on the current account held by the Treasury with the Bank. The Treasury bought back €39.4 billion of long-term bonds with an annual coupon of 1 per cent and gave Banca d'Italia €15.4 billion of long-term bonds with annual coupons ranging between 5 and 6.5 per cent. In this way general government debt was reduced by €23.9 billion. However, future government accounts were burdened by higher interest expenditure (about €0.5 billion per year), lower tax revenue due to the reduction of Banca d'Italia's taxable profits and lower dividends paid by the Bank to the Treasury.

Securitisations of future revenue, securitisations backed by a State guarantee, sales and lease back of assets and compensations for the transfer of a pension scheme from a company to the public sector have become increasingly popular among member states.[17] However, Eurostat decisions have ruled out the viability of these measures, among others, as a means to reduce present deficits. The revenue from these transactions must now be treated as a loan.

Future changes in valuations of assets and liabilities (ΔV) are mainly due to exchange rate fluctuations and capital gains and losses on assets. While in general the effects exerted by each of these factors can be expected to cancel out in the long run, there can be circumstances in which they display a drift (e.g. if the domestic currency consistently tends to devaluate). In this case, by disregarding them the true extent of liabilities is underestimated.

Measurement issues. – These refer to the valuation criteria followed in computing the debt indicator (FL_t) and to the definition of general government.

Concerning the valuation criteria, while the present value budget constraint is defined in terms of liabilities' redemption value, i.e. it is based on the price to be paid when liabilities fall due, the debt indicator chosen for EMU fiscal rules is considered at face value.

In most cases the two criteria coincide. However, this is by no means a rule without exceptions. One example is the valuation of Italian Post Office Deposit Certificates whose nominal (face) value does not include accrued interest which will have to be paid at withdrawal of funds. At the end of 2003 the difference between the two valuation criteria amounted to almost 5 percent of GDP. Bonds with this feature are issued also in Portugal.

[16] It should be noted that two different definitions of deficit are currently used in Europe: the first one, which is used for the purposes of EMU fiscal rules, is affected by swap operations; the second one, which is the proper ESA95 definition, is not.

[17] Securitisations of future revenue were carried out by Italy and Greece. Sale and lease back operations were sizeable in Austria. France was the first country to reduce its deficits (by 0.5 per cent of GDP) through compensation for the take over of pension liabilities (those of France Telecom) in 1997. Portugal made a similar operation in 2003 with the Postal Service pension Fund: the deficit reduction amounted to about 0.7 per cent of GDP.

Similarly, in the case of bonds envisaging the indexation of the principal to price increase, the EMU debt indicator does not include the accrued revaluation.

It is worth remarking that market valuation of liabilities would not represent a satisfactory solution for sustainability analysis. Market valuation refers to the amount the government would be asked to pay if it were to buy back its debt before it falls due, but the government has no obligation to do so. Furthermore, reference to market values would make the debt measure extremely volatile.

Concerning the definition of general government, it should be noted that the present value budget constraint holds for the activities of all public bodies whose financial behaviour may in the end have an impact on revenue needed to satisfy the budget constraint.

In ESA95 general government units are identified on a functional basis, meaning that general government includes those units whose principal function is the production of non-market services, or the redistribution of resources. To this end reference is primarily made to the amount of production sold in the market by a unit: the distinction between market and non-market units is based on the size of own revenue relative to costs regardless of the branch of economic activity. Publicly-owned or controlled units dealing with commercial operations (such as public enterprises) are therefore, as a rule, excluded from the general government sector.[18]

As a result, general government debt can be subject to sudden increases when the financial situation of these enterprises is so bad that the government is called to bail them out. [19]

Over the last decade debt assumptions have occurred in several EMU member states. In 1997 Italy's government assumed the outstanding liabilities of the national railways company (almost 2.5 per cent of GDP). In 2001 Belgium included in government debt the liabilities of the former Central Office of Mortgage Credit (in that year exogenous ad hoc factors increased the debt to GDP ratio by 1.9 percentage points); similar operations were carried out also in 2002. Moreover, in the coming years the Belgian government may assume part of the debt of the national railway company. In Austria over the last few years the Government issued bonds amounting to about 5.2 per cent of GDP in order to finance public enterprises ("Rechsträgerfinanzierung"). Significant debt assumptions were carried out also in France, Germany, Greece and Portugal.

4. ENFORCING THE RULES

In the context defined by EMU fiscal rules continuous within-year monitoring is necessary from the point of view of both the member state trying to comply with the rules and the agency (the European Commission) trying to assess the consistency of infra-annual developments with yearly targets. In this perspective the focus of the analysis is on flow variables. Therefore it becomes crucial that the

[18] The definition of general government units still allows margins for interpretation. There can be borderline cases, especially when revenue of public enterprises come from general government, which imply the need to ascertain whether these flows are truly revenue rather than transfers. Classification of units producing the same goods may therefore be dishomogeneous across countries, thus affecting the comparability and significance of data. The case of public enterprises involved in public investment or in the sale of public assets has recently come to the fore with reforms in Austria and Italy as compared to the current arrangements in Germany.

[19] Blejer and Cheasty (1991) considers different approaches to the issue of defining the public sector.

chosen deficit indicator is timely available, does not allow discretionary decisions and is not subject to relevant revisions.

From a fiscal monitoring point of view, the ESA deficit presents some relevant problems which are mostly linked to its reliance on accrual accounting, a feature that was heightened by the switch from the 1979 to the 1995 version of ESA (effective as of 2000).

Kopits and Craig (1998), while acknowledging that "accrual-based accounts are indispensable for gauging the macroeconomic repercussions of fiscal policy … especially over the medium term", note that cash accounting is preferred for short-term budgetary control and analysis (p. 22).[20]

First, as accrual data are essentially estimates based, *inter alia*, on cash data, their production is more time-consuming than that of cash data. This implies that the ESA95 deficit is not timely available. Indeed, most short-term budgetary indicators at the national level are based on cash data. There is a need to make these indicators consistent with the ESA95 budget balance. This can be problematic if the relationship between the cash deficit and the ESA95 deficit is not stable.[21]

Second, while economically more significant than cash data, accrual data embody judgmental elements. Reliance on accrual data may thus open excessive margins for discretion. Awareness of the potential problems linked with full reliance on accrual data is apparent in Eurostat's decision to specify that revenue computed in accrual terms should include only those items that are likely to be actually cashed in and that over the medium term accrual and cash data should converge.[22]

Third, accrual data are also more likely to be revised than cash data due to changes in the assumptions used in their estimation. The relevance of the issue is witnessed by the revision of the 2001 Portuguese deficit by almost 2 percentage points of GDP, which was partly motivated by the expiration of the derogation allowing Portugal to provide accrual data without ensuring consistency with cash data.

Further margins for discretion are determined by the fact that the ESA95 deficit is not affected by transactions in financial assets. The distinction between financial and non-financial assets is arbitrary: the sale of non-financial assets (land, buildings, but also UMTS licenses) is not intrinsically different from a privatization; also, in general, direct government investment is not intrinsically different from capital injections into public enterprises. The distinction also opens margins for discretion: whether a transaction is a capital injection (which does not affect the deficit) or a capital transfer (which does) depends on the profitability of the beneficiary enterprise, a concept which does not lend itself to unequivocal measurement.

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[20] Similarly, the Australian Treasury notes that: "The main advantage of accrual measures (as opposed to cash) is that they provide a more comprehensive indication of the total activity of Government and the long-term effects of current policy. Cash measures, do, however, have some advantages for tracking expenditures in a fiscal year and helping to identify the short-term effects of fiscal policy on the economy." (Commonwealth of Australia, 1999, p. 2).

[21] For instance, this is the case of Italy in recent years. The Italian Treasury tried to develop an ESA consistent estimate of quarterly deficit which has also been published for some time in official forecasting and planning documents. Istat began publishing ESA95 quarterly deficit data in 2003, earlier than scheduled at the European level (2005). Quarterly data are expected to be available with a delay of one quarter.

[22] See Eurostat (2000) and EU Regulations 2516/2000 and 995/2001.

The different accounting of investment spending and of capital injections, on the one hand, and of sales of capital goods and privatisations, on the other hand, can also induce significant distortion in the budgeting process as it is witnessed by the recent popularity of investment outsourcing, or for the use of one-off transactions, such as sales of real estate, to fine-tune the deficit figures.[23]

Table 1 presents deficits-to-GDP ratios for the years 1997-2003 as initially indicated by member states and subsequently revised. The revisions systematically determine worse budgetary balances for the euro area. The annual revision averages at about 0.2 percent of GDP. In most years the revision of the area deficit takes place within two years. Area averages mask more significant changes at the national level.

Upward deficit revisions have been large in:

- Spain for 1997 (0.6 per cent of GDP, to 3.2 per cent), 1998 (1.2, to 3.0 per cent) and 2000 (0.6 per cent);
- Italy for 2000 (0.3 per cent of GDP) and 2001 (1.2 per cent);
- Greece for the years 2000 (1.1 per cent), 2001 (1.5 per cent) and 2003 (1.5 per cent). While initially a small surplus was estimated for 2001, a sizeable deficit was later certified;
- Portugal for the years from 1998 to 2001.[24] The difference between current deficit estimates and the initial ones is 0.9 per cent of GDP for 1998, 0.8 for 1999, 1.4 for 2000 and 1.7 for 2001. Portugal is now recognised to have exceeded the 3 per cent of GDP limit in 1998 and 2001;
- the Netherlands in 2002 (0.8 per cent of GDP);
- Austria in 2000 (0.4 per cent of GDP).

On the contrary, Belgium has revised downwards its deficit for 1998 (-0.6 per cent of GDP) and 1999 (-0.5) and Luxembourg has significantly revised upwards its budget surplus for the years from 1997 to 2001.

Table 2 presents the general government debt-to-GDP ratios for the years 1997-2003 as initially indicated and subsequently revised. For the euro area the revisions are generally small and point in both directions. The overall revision concerning each year averages at about 0.4 percent of GDP.[25] Also in the case of debt the area developments mask more significant changes at the national level.

Upward debt to GDP ratio revisions have been equal or greater than one per cent of GDP in:

- Belgium for 1997 and 1998 (respectively 2.5 and 2.3 per cent of GDP);
- France for 1997 and 1998 (respectively 1.3 and 1.0 per cent of GDP);

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[23] Indeed, the deficit consistent with equation (1) should not be affected by any transaction in assets, whether financial or not. Proposals in favour of the adoption of the golden rule (i.e. the exclusion of net investment in real assets from the deficit) have been recently put forward in order to avoid incentives to unduly compress investment in physical capital. However, the golden rule may increase margins for opportunistic accounting (the evaluation of amortisation is but one example). Moreover, the golden rule would only partly remove the bias against non-financial outlays embodied in present rules, while introducing new biases (e.g. against investment in human capital). Interestingly, Article 104 of the Treaty includes gross investment expenditure among the elements to be taken into account when assessing governments fiscal positions but does not make explicit reference to the golden rule. For a discussion of the golden rule and of the feasibility of its implementation in the framework of EMU fiscal rules see Balassone and Franco (2000b).

[24] The revisions took place in 2002.

[25] Also for the EU revisions are small (with exception of the 1997 outturns) and point in both directions. The overall revision concerning each year averages at about -0.4 percent of GDP.

- Ireland for 1998 (2.8 per cent of GDP);
- Greece for 2000 and 2001 (respectively 2.3 and 7.2 per cent of GDP);
- Italy for the years 2000-02 (1.1 per cent of GDP on average);
- Austria for the years 1999-2001 (3.0, 4.2 and 5.3 per cent of GDP respectively).

Relevant downward revisions have been as frequent as upward ones. They mainly concerned Portugal, the Netherlands, Spain and Ireland.

Changes in debt, an approximation of a cash deficit measure (see also Section 5), are however more stable. This can be seen from Table 3, which presents the ratio to GDP of the change in debt for the years 1997-2003 as initially indicated and as subsequently revised. For the euro area, revisions are almost negligible (they are actually zero in three years out of the six for which revisions are available). Revisions affecting the change in debt are less widespread across countries than ESA95 deficit ones and cause both increases and decreases of previously released data. Revisions were significant in Austria in 1997, 2000, 2001 and in 2002 (respectively, +1.8, +1.6, +2.0 and –0.6 per cent of GDP) and in Greece in 2000 and in 2001 (respectively +2.3 and +4.3).

European Commission (2003) reports on the reliability of EMU fiscal indicators over the 2000-03 period (i.e. since ESA95 came into force). It notes that "the average absolute revision in the deficit ratios of Member States has been 0.15 per cent of GDP after six months, 0.22 per cent after one year and 0.26 after 18 months" (p. 66). While arguing that this figures are small compared with the average size of expenditure and revenue GDP ratios (around 47 per cent), European Commission (2003) also notes that "in some cases, the revisions in the government deficit ratios were unacceptably high".

In the end, the EMU deficit indicator allows comparability among Member States but is not the most appropriate indicator for monitoring short-term fiscal developments. In several cases the deficit has turned out to be significantly higher than it was at first estimated. In the light of the greater stability of debt estimates, the ESA95 deficit indicator could be usefully complemented with the change in debt.

Table 1 – General government net borrowing/lending (1997-2003): Spring Notifications' initial estimates and subsequent revisions (1)

(as a percentage of GDP)

	1997				1998					1999					2000 (2)				2001			2002		2003
	Spring 1998	Spring 1999	Spring 2000	Spring 2002	Spring 1999	Spring 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Spring 2002	Spring 2003	Spring 2004	Spring 2003	Spring 2004	Spring 2004
Belgium	-2.1	-1.9	-2.0	-2.0	-1.3	-1.0	-0.9	-0.8	-0.7	-0.9	-0.7	-0.6	-0.5	-0.4	0.0	0.1	0.1	0.2	0.2	0.4	0.5	0.1	0.1	0.2
Denmark	0.7	0.4	0.5	0.4	0.8	1.2	1.1	1.1	1.1	3.0	3.1	3.1	3.3	3.3	2.5	2.5	2.6	2.6	3.1	3.1	3.1	2	1.7	1.5
Germany	-2.7	-2.7	-2.6	-2.7	-2.1	-1.7	-2.1	-2.2	-2.2	-1.1	-1.4	-1.6	-1.5	-1.5	1.5	1.2	1.1	1.3	-2.7	-2.8	-2.8	-3.6	-3.5	-3.9
Greece (3)	-4.0	-3.9	-4.6	-4.7	-2.4	-3.1	-3.1	-2.4	-2.5	-1.6	-1.8	-1.7	-1.8	-1.8	-0.9	-0.8	-1.9	-2.0	0.1	-1.4	-1.4	-1.2	-1.4	-1.7
Spain	-2.6	-2.6	-3.2	-3.2	-1.8	-2.6	-2.6	-2.6	-3.0	-1.1	-1.2	-1.1	-1.2	-1.2	-0.3	-0.3	-0.8	-0.9	0.0	-0.1	-0.4	-0.1	0.0	0.3
France	-3.0	-3.0	-3.0	-3.0	-2.9	-2.7	-2.7	-2.7	-2.7	-1.8	-1.6	-1.6	-1.8	-1.8	-1.3	-1.3	-1.4	-1.4	-1.4	-1.5	-1.5	-3.1	-3.2	-4.1
Ireland	0.9	1.1	0.8	1.2	2.3	2.1	2.1	2.3	2.3	2.0	2.1	2.3	2.3	2.4	4.5	4.5	4.3	4.4	1.7	1.1	1.1	-0.1	-0.2	0.2
Italy	-2.7	-2.7	-2.7	-2.7	-2.7	-2.8	-2.8	-2.8	-2.8	-1.9	-1.8	-1.8	-1.7	-1.7	-0.3	-0.5	-0.6	-0.6	-1.4	-2.6	-2.6	-2.3	-2.3	-2.4
Luxembourg	1.7	2.9	3.6	2.8	2.1	3.2	3.2	3.2	3.0	2.4	4.7	3.8	3.5	3.7	5.3	5.8	6.1	6.3	5.0	6.4	6.3	2.6	2.7	-0.1
Netherlands	-1.4	-0.9	-1.2	-1.1	-0.9	-0.8	-0.7	-0.8	-0.8	0.5	1.0	0.4	0.7	0.7	2.0	2.2	2.2	2.2	0.2	0.1	0.0	-1.1	-1.9	-3.2
Austria	-2.5	-1.9	-1.9	-2.0	-2.1	-2.5	-2.2	-2.4	-2.5	-2.0	-2.1	-2.2	-2.3	-2.3	-1.1	-1.5	-1.5	-1.5	0.1	0.3	0.2	-0.6	-0.2	-1.1
Portugal	-2.5	-2.5	-2.6	-2.6	-2.3	-2.1	-2.3	-2.3	-3.2	-2.0	-2.1	-2.2	-2.8	-2.8	-1.4	-1.5	-2.8	-2.8	-2.7	-4.2	-4.4	-2.7	-2.7	-2.8
Finland	-0.9	-1.2	-1.5	-1.5	1.0	1.3	1.3	1.3	1.5	2.3	1.8	1.9	2.0	2.2	6.7	7.0	6.9	7.1	4.9	5.1	5.2	4.7	4.3	2.3
Sweden	-0.8	-0.7	-2.0	-1.6	2.0	1.9	1.9	1.9	2.3	1.9	1.8	1.5	1.5	2.5	4.0	3.7	3.4	5.1	4.8	4.5	2.8	1.3	0.0	0.7
UK	-1.9	-1.9	-2.0	-2.2	0.6	0.3	0.4	0.4	0.2	1.2	1.3	1.1	1.1	1.1	4.3	4.1	3.9	3.9	0.9	0.8	0.7	-1.3	-1.6	-3.2
Euro area (4)	-2.5	-2.5	-2.6	-2.6	-2.1	-2.0	-2.1	-2.2	-2.3	-1.2	-1.2	-1.3	-1.3	-1.3	0.4	0.2	0.1	0.1	-1.3	-1.6	-1.6	-2.2	-2.3	-2.7
UE	-2.4	-2.3	-2.4	-2.5	-1.5	-1.5	-1.5	-1.6	-1.7	-0.6	-0.6	-0.7	-0.7	-0.7	1.2	1.1	0.9	1.0	-0.6	-0.9	-1.0	-1.9	-2.0	-2.6

(1) A negative sign indicates a deficit; a positive sign indicates a surplus. – (2) Including UMTS proceeds. – (3) The 2003 net borrowing included in the table is the one reported in the first March 2004 Notification. It was then revised to 3.2 per cent of GDP in May 2004. – (4) Excluding Greece up to the Spring 2000 Notifications.

Table 2 – General government gross debt (1997-2003): Spring Notifications' initial estimates and subsequent revisions
(as a percentage of GDP)

	1997					1998					1999					2000				2001			2002		2003
	Spring 1998	Spring 1999	Spring 2000	Spring 2001	Spring 2002	Spring 1999	Spring 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Spring 2002	Spring 2003	Spring 2004	Spring 2003	Spring 2004	Spring 2004
Belgium	122.2	123.4	123.0	125.3	124.7	117.3	117.4	119.8	119.3	119.6	114.4	116.4	115.0	114.9	114.8	110.9	109.3	109.6	109.1	107.5	108.5	108.1	105.3	105.8	100.5
Denmark	65.1	63.6	61.3	61.4	61.2	58.1	55.6	55.8	56.2	56.2	52.6	52.6	52.7	53.0	53.0	47.3	46.8	47.4	50.1	44.7	45.4	47.8	45.2	47.2	45.0
Germany	61.3	61.5	60.9	60.9	61.0	61.0	60.7	60.7	60.9	60.9	61.0	61.1	61.3	61.2	61.2	60.2	60.3	60.2	60.2	59.8	59.5	59.4	60.8	60.8	64.2
Greece	108.7	109.4	108.5	108.3	108.2	106.5	105.4	105.5	105.0	105.8	104.4	104.6	103.8	105.1	105.2	103.9	102.8	106.2	106.2	99.7	107.0	106.9	104.9	104.7	103.0
Spain	68.8	67.5	66.7	66.7	66.6	65.6	64.9	64.7	64.6	64.6	63.5	63.4	63.1	63.1	63.1	60.6	60.4	60.5	61.2	57.2	56.9	57.5	54.0	54.6	50.8
France	58.0	58.1	59.0	59.3	59.3	58.5	59.3	59.7	59.5	59.5	58.6	58.7	58.5	58.5	58.5	58.0	57.4	57.2	57.2	57.2	56.8	56.8	59.1	58.6	63.0
Ireland	66.3	61.3	65.3	65.1	65.1	52.1	55.6	55.0	55.1	54.9	52.4	50.1	49.6	49.3	48.6	39.1	39.0	39.3	38.4	36.3	36.8	36.1	33.3	32.3	32.0
Italy	121.6	122.4	119.8	120.1	120.2	118.7	116.3	116.2	116.4	116.3	114.9	114.5	114.5	114.9	115.5	110.2	110.6	110.6	111.2	109.4	109.5	110.6	106.7	108.0	106.2
Luxembourg	6.7	6.4	6.0	6.0	6.0	6.7	6.4	6.4	6.3	6.3	6.2	6.0	6.0	6.0	6.0	5.3	5.6	5.6	5.5	5.5	5.6	5.5	5.3	5.7	4.9
Netherlands	72.1	71.2	70.3	70.0	69.9	67.7	67.0	66.8	66.8	66.8	63.9	63.2	63.1	63.1	63.1	56.3	56.0	55.8	55.9	52.9	52.8	52.9	52.6	52.6	54.8
Austria	66.1	64.3	63.9	64.7	64.7	63.1	63.5	63.9	63.9	63.7	64.5	64.7	64.9	67.5	67.5	62.8	63.6	66.8	67.0	61.8	67.3	67.1	68.7	66.6	65.0
Portugal	62.0	61.7	60.3	59.1	58.9	57.8	56.5	55.3	54.8	55.0	56.7	55.0	54.2	54.3	54.3	53.8	53.4	53.3	53.3	55.4	55.6	55.6	58.1	58.1	59.4
Finland	55.8	54.9	54.1	54.1	54.1	49.6	49.0	48.8	48.8	48.6	47.1	46.9	46.8	47.0	47.0	44.0	44.0	44.5	44.6	43.6	43.8	43.9	42.7	42.6	45.3
Sweden	76.6	76.9	75.0	73.0	73.1	75.2	72.4	71.8	70.5	68.0	65.5	65.2	65.0	62.7	62.8	55.6	55.3	52.8	52.8	55.9	54.4	54.4	52.6	52.6	51.9
UK	53.4	52.1	50.8	51.1	50.8	49.4	48.4	48.1	47.6	47.7	46.0	45.7	45.2	45.1	45.0	42.9	42.4	42.1	42.1	39.0	38.9	38.9	38.4	38.5	39.9
Euro area (1)	75.2	75.1	74.5	74.7	75.3	73.4	73.1	73.1	73.7	73.7	72.3	72.0	72.6	72.7	72.8	69.7	70.2	70.2	70.4	69.1	69.2	69.4	69.2	69.2	70.4
UE	72.1	71.7	71.0	71.1	71.0	69.7	69.0	69.0	68.9	68.8	67.6	67.5	67.3	67.3	67.8	64.5	64.2	64.1	64.0	62.8	62.9	63.2	62.7	62.5	64.0

(1) Excluding Greece up to the Spring 2000 Notifications.

Table 3 – General government change in debt (1997-2003): Spring Notifications' initial estimates and subsequent revisions
(as a percentage of GDP)

	1997			1998			1999			2000			2001			2002		2003
	Spring 1998	Spring 1999	Spring 2000	Spring 1999	Spring 2000	Spring 2001	Spring 2000	Spring 2001	Spring 2002	Spring 2001	Spring 2002	Spring 2003	Spring 2002	Spring 2003	Spring 2004	Spring 2003	Spring 2004	Spring 2004
Belgium	0.6	0.4	0.7	-0.4	-0.5	-0.6	0.9	0.9	0.3	0.3	0.4	0.2	2.0	1.9	1.6	-0.1	0.3	-2.1
Denmark	-1.7	-0.7	-0.7	-3.1	-2.8	-2.8	-1.0	-0.8	-0.8	-2.5	-2.6	-2.6	-0.5	-0.4	-0.6	1.0	0.7	-1.2
Germany	2.5	2.5	2.4	1.7	1.7	1.7	1.8	1.8	1.8	0.8	0.6	0.6	0.5	0.5	0.5	2.4	2.4	3.9
Greece	7.7	7.7	7.6	5.7	5.5	5.6	5.4	5.4	5.4	6.4	6.3	8.7	4.0	8.3	8.3	5.7	5.6	5.9
Spain	2.5	2.5	2.5	2.1	2.2	2.2	2.9	2.9	2.8	1.8	1.8	2.0	0.7	0.3	0.4	0.5	0.6	-0.3
France	4.2	4.2	3.9	2.6	2.6	2.7	1.1	1.0	1.1	1.4	1.4	1.4	1.8	1.8	1.8	3.8	3.7	5.5
Ireland	0.3	0.3	0.8	-1.5	-1.8	-1.7	2.1	1.8	1.9	-3.8	-3.8	-3.6	1.6	1.4	1.7	0.5	0.3	1.1
Italy	2.6	2.7	2.7	1.4	1.4	1.4	1.9	1.9	2.1	1.5	1.6	1.5	3.5	3.8	4.2	0.5	1.0	1.6
Luxembourg	0.6	0.5	0.5	0.7	0.8	0.8	0.5	0.1	0.0	0.1	0.5	0.2	0.0	0.1	0.2	0.2	0.3	-0.6
Netherlands	-1.1	-1.3	-0.9	0.2	0.5	0.8	-0.1	-0.1	-0.2	-2.7	-2.8	-2.9	0.2	0.5	0.5	1.6	1.6	3.3
Austria	-0.8	-2.7	-2.6	1.6	1.7	1.7	3.2	3.1	3.1	1.0	1.3	2.6	0.0	2.0	2.0	1.8	1.2	0.1
Portugal	0.6	0.7	0.8	0.4	0.6	0.5	3.4	3.2	3.0	2.2	2.4	2.5	5.5	5.5	5.5	5.2	5.2	2.5
Finland	2.0	1.5	1.5	-1.4	-1.1	-1.1	0.2	0.3	-0.2	0.9	1.0	1.2	0.9	1.1	1.1	0.2	0.1	3.7
Sweden	1.9	2.0	1.3	1.2	0.5	1.9	-3.8	-3.4	-2.0	-6.8	-6.8	-6.5	2.4	3.2	3.2	-0.2	0.1	1.3
UK	1.9	1.7	1.4	-0.3	0.1	-0.3	-0.1	-0.2	-0.2	-0.7	-0.8	-0.8	-1.4	-1.4	-1.4	1.4	1.4	3.4
Euro area	2.5	2.4	2.4	1.7	1.7	1.7	1.7	1.7	1.7	0.9	0.9	1.0	1.6	1.7	1.8	2.1	2.1	2.9

5. CASE STUDIES

The discussion in the previous Sections shows how both the deficit and debt indicators can be easily manipulated. However, it also suggests that since the two indicators are not mutually consistent (i.e. the ESA95 deficit is not the flow concept corresponding to changes in the stock of gross financial liabilities), generally a given budgetary measure affects them differently.

This can be seen most easily if we compare ESA95 deficit with the change in debt. The former is given by

(2) $DEF_t \equiv G_t - T_t$

while the latter is given by

(3) $\Delta FL_t \equiv G_t - T_t + NAFA_t + \Delta VL_t + CA_t$

where NAFA is net acquisition of financial assets, CA is the difference between cash and accrual valuations (the former used to compute the change in debt, the latter to compute the deficit; in the medium term the difference should tend to zero) and ΔVL is valuation changes in liabilities only.

The discrepancy between the change in the debt and the deficit measure chosen for EMU rules was by no means negligible over the 1990s. The yearly average for EU countries between 1992 and 2001 was almost 1 per cent of GDP.

While at present this inconsistency is mainly seen as an unnecessary complication to the assessment of the Stability Programmes submitted by member states, it also suggests the potential for unexploited synergies from the joint assessment of the two indicators.

From (3) one can obtain an estimate of the deficit in cash terms:

(4) $DEFC_t = \Delta FL_t - NAFA_t - \Delta VL_t$

The comparison of accrual and cash deficit provides indications concerning the consistency of accrual deficit estimates.

Monitoring the extent of gross asset acquisition allows an evaluation of the degree of prudence exercised when deciding on the classification of transactions.

At the same time, by considering privatisations and operations determining changes in the valuation of liabilities one can assess the extent to which debt dynamics is dependent on ad-hoc non-recurrent factors which leave the government's net asset position unaffected (if not worsened).[26]

EU countries are already required to provide the information needed for these cross checks in the context of the bi-annual Notification of public finance data. However, these data are not made publicly available, thereby limiting the possibility of independent assessments. Moreover, present arrangements do not provide for an explicit estimation of the cash deficit.

[26] Ideally one would also want to control the extent of one-off measures affecting directly G and T in equations (2) and (3). See Section 6.

Evidence supporting the usefulness of these cross-check examination of fiscal data is provided by the three case studies examined in this Section concerning abrupt and significant deficit data revisions. These revisions occurred in Italy and Portugal in 2002 and in Greece in 2004.

5.1 Italy 2001. – In March 2002 the Italian Statistical Office (Istat) released statistics showing that net borrowing in 2001 was equal to 1.4 per cent of GDP (as against 1.7 per cent in 2000, excluding UMTS proceeds). The outcome was at the top end of the range of forecasts by international organisations (1.3 per cent of GDP according to the IMF in October 2001; 1.1 according to the European Commission in November 2001; 1.4 according to the OECD in December 2001).

In June 2002 Istat raised to 1.6 per cent of GDP the figure for the 2001 deficit, primarily owing to the revision of the data on the health sector. A similar revision, again due to health sector data, had already been made in March 2002 with reference to the 2000 out-turn (raised from 1.5 to 1.7 per cent).

In July 2002 Eurostat announced its decision on the accounting treatment, for the purposes of the excessive deficit procedure, of securitisations carried out by governmental authorities. These implied an upward revision of Italy's deficit to 2.2 per cent of GDP.[27]

In March 2003, Istat again revised upwards the 2001 figure, to 2.6 per cent of GDP. This revision was due to the availability of more complete information on the different government tiers' economic accounts.[28]

Overall, the initial estimate on the 2001 deficit was revised upwards by 1.2 percentage points of GDP, from 1.4 per cent in March 2002 to 2.6 in March 2003, and only less than half of the revision was due to non-ordinary reasons, i.e. the Eurostat decision concerning securitisations. Istat stressed that in the past, up to the March 2002 Notification to the European Commission, ordinary revisions (i.e. excluding for example those related to Eurostat decision on securitisations) of deficit figures from one year to the following were small and normally not exceeding +/- 0.1 per cent of GDP.[29]

The decline initially indicated for the deficit between 2000 and 2001 (from 1.7 to 1.4 per cent of GDP) was in marked contrast with the dynamics observed for the change in debt, rising from 1.5 per cent of GDP in 2000 to 3.5 in 2001. This deficit indicator turned out to be more stable than ESA95 net borrowing: overall it was revised upwards by only 0.2 percentage points.

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[27] According to Eurostat's decision securitisations are considered loans to general government if: (1) they concern future income flows unrelated to previously existing assets; (2) they do not involve an adequate transfer of risk to the assignee, i.e. the special purpose vehicle (in particular, Eurostat established that the risk is actually transferred only when the public sector no longer guarantees the securitised asset and if the government is paid at least 85 per cent of the market value of the securitised assets). Securitisation carried out in Italy in 2001 concerned real estate and future lotto receipts, they were both considered loans as, in the first case, the government received less than 85 per cent of the market value of the securitised buildings and, in the second case, the future income flows were not related to previously existing assets.

[28] In particular, it turned out that in previously released data: (1) health sector expenditure, already revised upwards in June 2002, were still underestimated; (2) general government tax revenue were overestimated; (3) State sector expenditure concerning intermediate consumption, compensation of employees, subsidies and interests were underestimated; (4) central government interest expenditure were underestimated.

[29] See Istat press release (28 February 2003; page 7).

The decline in the net borrowing was also at odds with the increase in the cash deficit computed by subtracting from the change in debt net asset acquisitions and valuation effects: the cash deficit was 3.0 per cent in 2000 and 3.3 per cent in 2001. Also in this case the effect of subsequent revisions was small (0.2 percentage points).

It should be recalled that all the information for computing these indicators were available since the March 2002 Notification to the European Commission. A comparison of ESA95 net borrowing with these indicators would have provided early hints of the coming revisions. This exercise was in fact carried out by Banca d'Italia in the Annual Report released in May 2002.

Fig. 1a – Italy: net borrowing and change in gross debt as available in May 2002
(thousands of euros)

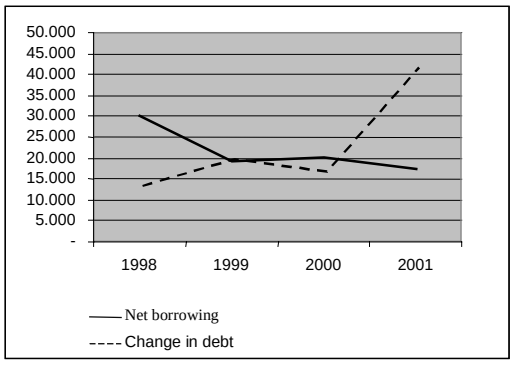


Fig. 1b – Italy: net borrowing and cash deficit as available in May 2002
(thousands of euros)

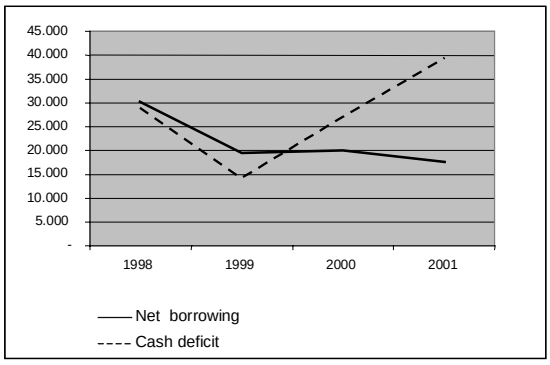


Fig. 2a – Italy: net borrowing and change in gross debt as available in May 2003
(thousands of euros)

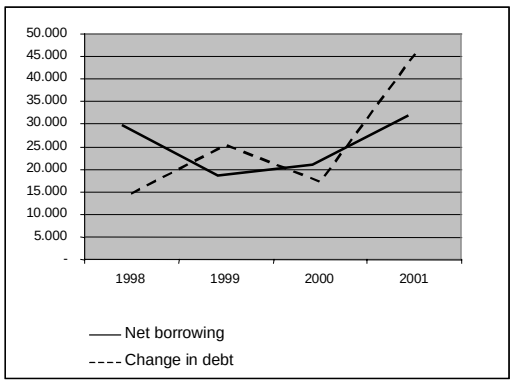


Fig. 2b – Italy: net borrowing and cash deficit as available in May 2003
(thousands of euros)

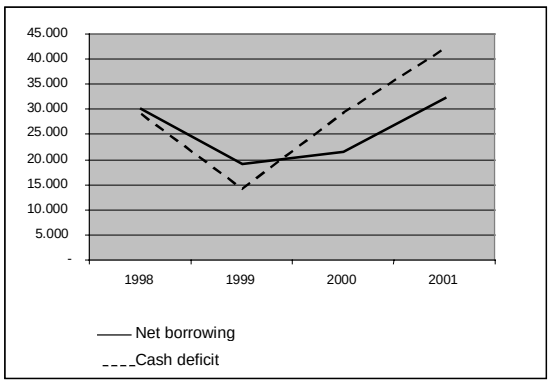


Figure 1 shows the divergence between ESA95 deficit and both the change in debt (fig. 1a) and the estimate of the cash deficit (fig. 1b) as it first appeared in March 2002. Figure 2 shows the same variables after the revisions: the dynamics of the ESA95 deficit is clearly closer to that of the other two indicators. We conclude that the joint examination of the three indicators provided an early warning of the likely forthcoming revisions.

It should be noted that over the years up to 2001 gross asset acquisition were sizeable, averaging at 0.8 per cent of GDP over the 1998-2000 period. Moreover, the increase in debt was limited by large sales of assets both financial and non-financial (e.g., UMTS licences), amounting to more than 4 percentage points of GDP between 1998 and 2000.

5.2 Portugal 2001. – In its first Notification about 2001 fiscal outcomes, Portugal estimated the general government deficit to be 2.2 per cent of GDP as against 1.5 percent in 2000. At the time, the most recent deficit forecasts by international institution were somewhat more favourable than the data notified by Portugal: 2.0 per cent of GDP according to the IMF (October 2001), 2.0 according to the European Commission (November 2001), 1.7 according to the OECD (December 2001).

Eurostat stated that it was not in a position to certify the figures included in the Portuguese Notification due to, among other reasons, the lack of information on capital injections from the government to public corporations which had been treated as acquisition of shares and other equities with no effect on the government deficit. Moreover, Eurostat stressed that, as some of these capital injections might be reclassified as capital transfers, the notified deficit is to be considered as provisional and likely to be increased.

In Spring 2002 a commission headed by the Banco de Portugal and composed also of representatives of the Ministry of Finance and the National Statistical Institute was set up with the mandate of analysing and updating the government accounts.

In September the figure for the 2001 deficit was revised upwards to 4.1 per cent of GDP. This revision was due to a number of factors: new data on the accounts of the local authorities; the inclusion in the budget accounts of some injections of capital into publicly-owned companies; changes to the methods used to account for expenditure carryovers and revenue connected with the EU structural funds; and the expiration of a derogation with regard to the methods of recording receipts accruing in the year.

The increase initially indicated for the deficit between 2000 and 2001 (from 1.5 to 2.2 per cent of GDP) was markedly less pronounced than the one observed for the change in debt, rising from 2.5 per cent of GDP in 2000 to 5.5 in 2001. This indicator was not revised.

Figure 3a shows the initial divergence between ESA95 deficit and the change in debt. Figure 3b shows the same variables after the revisions: the ESA95 deficit is clearly closer to the change in debt also in the years preceding 2001.

Fig. 3a – Portugal: net borrowing and change in gross debt as available in March 2002
(thousands of euros)

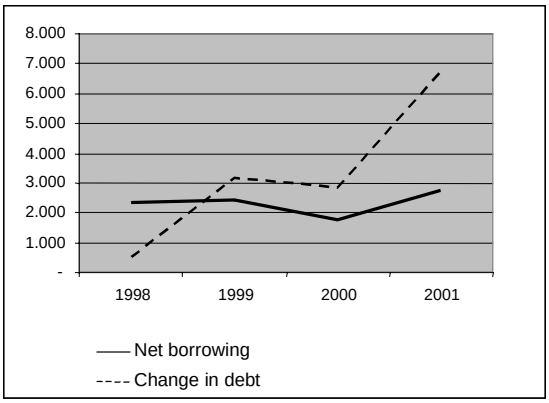
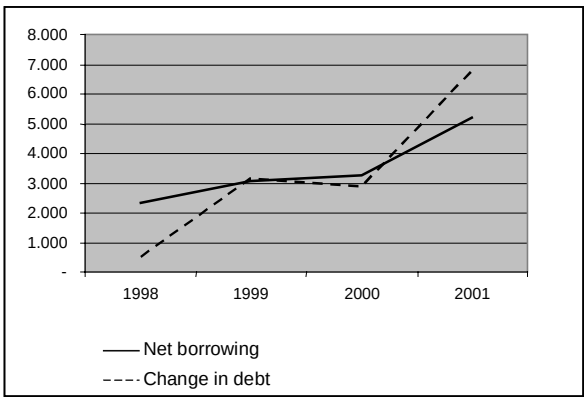


Fig. 3b – Portugal: net borrowing and cash deficit as available in March 2003
(thousands of euros)



5.3 Greece 2003. – In its first Notification about 2003 fiscal outcomes, Greece estimated the general government deficit to be 1.7 per cent of GDP, as against 1.4 percent in 2003. At the time, the most recent deficit forecasts by international institution were broadly in line with the data notified by Greece: 1.4 per cent of GDP according to the IMF (September 2003), 1.7 according to the European Commission (October 2003), 1.7 according to the OECD (December 2003).

Later on in March Greece sent updated data to the European Commission. According to these figures the 2003 deficit was revised upwards to 3.0 per cent of GDP. In April, in publishing the Spring Forecasts, the Commission took into account the latter Notification and stressed that "the data for 2003 are not yet validated by Eurostat and do not therefore provide a reliable basis for assessing the budgetary situation at this stage" and that "[a] fact-finding mission is being prepared for the end of April in order to have more information about the budgetary situation in this country and decide on steps to be taken".

At the beginning of May, following an additional Notification, Eurostat verified that in 2003 general government deficit was 3.2 per cent of GDP.

The revision was essentially due to: (1) lower tax revenue (mainly concerning VAT); (2) lower payments received from EU institutions in the context of structural funds programmes; (3) the reclassification as a financial transaction, of a payment from the Saving Postal Bank to government.

Eurostat also stressed that it still was not in a position to fully certify the Greek general government data for 2003 and possibly for previous years because of a possible underestimation of government expenditure for the procurement of military equipment and because of the lack of reliable information for recent years concerning the surpluses notified for the sub-sector Social Security Funds.

The increase initially indicated for the deficit between 2002 and 2003 (from 1.4 to 1.7 per cent of GDP) was in line with the one observed for the change in debt, rising from 5.6 per cent of GDP in 2002 to 5.9 in 2003.[30] However, the level of the two indicators was markedly different (fig. 4a). Figure 4b shows how the subsequent deficit revision has begun to reduce the discrepancy.

Fig. 4a – Greece: net borrowing and change in gross debt as available in March 2004
(thousands of euros)

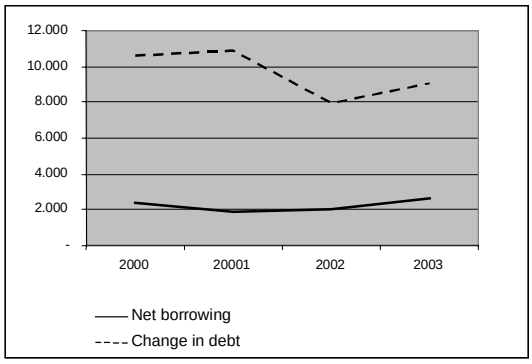
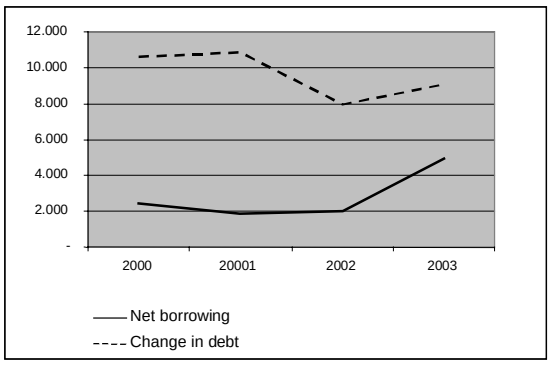


Fig. 4b – Greece: net borrowing and cash deficit as available in May 2004
(thousands of euros)



[30] To date this indicator has not been revised.

6. FOR AN INTEGRATED FRAMEWORK OF ANALYSIS

The ESA95 deficit is the main indicator for evaluating fiscal policy developments in the EMU. It is the cornerstone of fiscal programmes, fiscal monitoring and ex-post assessment of budgetary policy. This extensive use contrasts with the conclusions of the economic literature concerning fiscal indicators. This literature stresses that the evaluation of all aspects of fiscal policy (e.g. macroeconomic effects, size of discretionary policy measures, impact on national savings, fiscal sustainability) cannot be based on a single indicator.[31] The analysis of each aspect of fiscal policy is best conducted with reference to a specific indicator.[32]

Moreover, even assuming that fiscal sustainability is the unique fiscal policy target, the ESA95 deficit can only be a starting point for economic analysis and cannot capture all the relevant features of fiscal developments. For instance, an improvement in the budget balance should be qualified when it occurs at the same time as a deterioration of public enterprises' accounts that may lead to a future transfer or when it occurs because of exceptional transactions. A deterioration in government accounts may receive a positive appreciation, if it is a temporary phenomenon linked, for example to a pension reform that will lead to a reduction in future spending. Different accounting methods and assumptions can lead to a variety of deficit values which may provide very different indications about budgetary situation and prospects.[33]

As noted in the previous Sections, the ESA95 deficit raises some problems from a monitoring point of view. This reflects the fact that ESA95 was not developed as a tool for budgetary monitoring. It was adopted by the EU because it was the only available option.

In considering possible reforms, one should keep in mind that, as the literature of monetary policy has also indicated, any single policy relevant indicator is likely to be distorted (Goodhard, 1984). This consideration suggests that replacing the ESA95 deficit with another indicator would not be useful. Any alternative indicator would also be prone to distortions and would not capture all the aspects of fiscal policy.

In the end, it is wise to consider the use of a broad range of indicators. This Section considers how the current indicators can be better exploited and integrated with additional complementary indicators, whose introduction would not require a change in the Treaty.

6.1 Exploiting synergies. – The three cases examined in Section 5 share a common feature: the change in gross general government debt was much larger than the initial estimate of the deficit and was not significantly modified upwards. This indicates that the change in debt and the cash deficit underlying it can be used to keep in check ESA95 deficit and that there are non-exploited synergies between the two EMU indicators.

The European Commission recently made a similar point: "large and persistent stock-flow adjustment should give cause for concern, as they may be the result of inappropriate recording of

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[31] "... too much concentration on a single indicator of policy 'success' over-simplifies the technical issues concerning the running of the economy and diverts attention away from the more fundamental problems affecting its state of health." (Peacock and Shaw, 1981, p. 5).

[32] See for example Blanchard (1990), Blanchard et al. (1990) and Blejer and Cheasty (1991 and 1993).

[33] See for example Boskin (1982) and Eisner (1984).

budgetary operations and can lead to large ex-post upward revisions of deficit levels" (European Commission, 2003, p. 59). The Commission also argued that "it is important that a link is established between the ESA government deficit and the cash-based public accounts deficits. This is important because the cash-based balances are easier to compile and to monitor as they are directly observable". Moreover, while "all countries transmit to the Commission data on the link between the cash-basis figures and the ESA government deficit […], for several countries this information is relatively confusing or not complete or there are important statistical discrepancies" (p. 67).

Greater reliance on cash and debt figures would have further benefits in terms of timeliness and transparency. As to the former, data on financial liabilities are available more rapidly than data on real transactions and on transactions in financial assets (generally the information set for the general government is completed within a month after the end of the reference period); as to the latter, data are usually publicly available from market sources.[34]

The ESA95 deficit should be systematically reconciled with the change in gross debt and with the underlying cash deficit.[35] The Stability and Converge programmes, which set targets both for the budget balance and the debt, should provide information reconciling the two indicators. The reconciliation currently included in the bi-annual Notifications should be made available to the public and be extensively explained.

Full details should be provided concerning the transactions in financial assets, the difference between cash and accrual figures, the difference between the nominal value of bonds and their price at issuance, the effects on the change in nominal debt of exchange rate movements via foreign currency denominated government bonds and the other factors that may determine a wedge between the deficit and change of gross debt.

If a significant departure from the target debt change is detected during the year, the government should explain the implications for the deficit target.

6.2 A broader network of indicators. – While a more transparent and publicised reconciliation of deficit and debt figures would surely help, further complementing these indicators can prove beneficial from the point of view of both rules enforcement and sustainability analysis.

The gross debt definition overlooks the fact that assets owned by government can be sold to repay the debt. Relying both on a gross and a net debt definition is preferable. The former is more precise, more timely available and more relevant over the short term, the latter is more complete and more relevant in a longer time perspective. As we pointed out in Section 3, an adequate measure of net debt may not be available. However, it may be useful to complement gross debt with: (a) a measure of the most liquid assets (e.g. bank deposits) and of those other assets whose valuation is less problematic (e.g. performing loans); (b) a measure of changes in net debt (valuation problems do not affect assets flows as much as stocks).

[34] Or, at worst, they are available not only from government sources but also from the counterparts of the underlying financial transactions. While it must be recognised that cash data are not immune from window-dressing, e.g. by delaying payments to providers or to employees, it is also true that in these circumstances there would be somebody voicing against such practices (the providers and the employees) which is not the case for opportunistic accrual accounting.

[35] In the Australian accounting framework, which is based on accrual criteria, accrual and cash figures are reconciled. See Commonwealth of Australia (1999) and Robinson (2002).

Moreover, liabilities excluded from EMU's debt definition should also be monitored. First, there are contingent liabilities[36] that can emerge from the government involvement in the economy (guaranteeing the debt of public enterprises or providing deposit insurance). Second, there are non-financial liabilities (such as commercial debt and the credits of taxpayers).[37] On the basis of an agreed and transparent framework, governments could be required to provide estimates of these off-budget liabilities on a yearly basis. This would allow to have an estimate of the overall fiscal position of government.[38]

It would also be useful to examine the factors affecting the budget on a temporary basis and long-term budgetary trends.

The size of one-off measures should be publicised in order to evaluate the underlying budget balance. The measurement of one-off effects in public budgets raises some methodological issues. Public spending normally is the result of several provisions and events with temporary expansionary or restrictive effects. It may probably be useful to consider only the measures having transitory effects on public revenue (e.g. sales of assets, anticipation of tax payments, tax amnesties). Guidelines concerning the definition of one-off measures would have to be agreed in advance.

Periodical and standardised assessments of the long term implications of current budgetary policies should also be provided. These indicators would also help in ensuring fiscal discipline via market incentives.[39] Estimates should be revised every year. Changes should be extensively explained.

7. CONCLUSIONS

The Ecofin Council, while noting the progress in the provision of fiscal statistics, has recently stated that "the compilation and reporting of statistics for the Excessive deficit procedure must not be vulnerable to political and electoral cycles". It has also noted that it "considers that integrity, independence and accountability of data compilers, and the transparency of the compilation methods, underpinned by the appropriate institutional arrangements, are crucial to ensure such high-quality statistics." Finally, it has invited "the Commission to make, by June 2005, a proposal for such standards, which reinforce the independence, integrity and accountability of the Member States' national statistical institutes."

The Council has therefore implicitly recognised that fiscal statistics can be affected by political considerations and that there is still room to improve both the transparency of methodologies and the independence of statistical institutes. This situation is particularly worrying in a period of fiscal stress in which pressure to engage in nontransparent practices may mount.[40]

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[36] A contingent liability can be defined as a public sector action that determines a cash expenditure only if and when a certain event takes place.

[37] See Kopits and Craig (1998).

[38] See for instance the analysis in Commonwealth of Australia (2002a).

[39] A first step in this direction is represented by the indication to introduce long term expenditure projections in the stability programmes.

[40] Kopits and Craig (1998) and, more extensively, Petersen (2003).

The previous Sections have stressed that whatever the adopted fiscal indicators, it is important to be aware of the unavoidable pressures for statistical manipulation. While highlighting the problematic aspects of EMU's deficit and debt, we have noted that any indicator would suffer the same pressures. Therefore, we have suggested to consider jointly the two existing indicators (which implies attributing a greater role to the debt indicator) and, even better, to develop a battery of indicators in order to increase the relevance of fiscal monitoring for fiscal sustainability.

Greater transparency can increase the credibility of rules by allowing a better judgement of fiscal performance and by limiting the role of accounting creativity in meeting targets (IMF, 2001). It can also help in ensuring fiscal discipline via market incentives (Kopits and Craig, 1998).

By complementing the existing indicators with a cash deficit and net debt estimates, one would also redress the mismatch of tools and targets implicit in EMU rules. These rules rely on accrual figures for short-term monitoring and on cash-consistent figures for the evaluation of long-term sustainability. However, accrual accounting is better suited for medium and long-term sustainability analysis and cash figures are best used for short-term monitoring.

The proposals formulated in Section 6 are in line with the reforms introduced in recent years in some countries in order to improve the analysis of fiscal developments.

In the context of a reform of budgetary targets, New Zealand has introduced measures aimed at increasing fiscal transparency and at indicating a commitment to sound fiscal policies (New Zealand Treasury, 1995; Cangiano, 1996). Public accounts are reported for a broad public sector, which also includes non-financial enterprises and public financial institutions. While the accounting statements are accrual-based, cash accounts continue to be published. Estimates of all measurable commitments and contingent liabilities are provided.

The Australian budget presents a detailed analysis of financial and non-financial assets (Commonwealth of Australia, 2002a). The latter include land, buildings, plant, equipment, infrastructure and inventories. The budget also examines financial and non-financial liabilities. The latter include public employees' pension liabilities and other entitlements, subsidies and grants payable and payable to suppliers. Both the net worth (total assets minus total liabilities) and the net debt (gross financial liabilities minus financial assets) are presented. Figures are provided for the general government (central and state/local), for public non-financial corporations and for the consolidated public sector. The budget balance is presented both in accrual and cash terms. The Australian Government also releases a report examining budgetary prospects over a 40 year period (Commonwealth of Australia, 2002b). Inter alia, the report evaluates the effects of demographic changes on the main spending programmes.

These and other examples provide evidence that "transparency is conducive to successful fiscal policy whether in the context of rules-based or of discretionary policymaking" (Kopits, 2001, p. 74) since "prudent expenditure, productive and equitable taxation, and due equilibrium between income and outlay will only be found where responsibility is enforced by the public opinion of an active and enlightened community" (Bastable, 1927, p. 761).

References

1. Auerbach, A.J., Gokhale, J. and Kotlikoff, L.J. (1991), "Generational Accounts: A Meaningful Alternative to Deficit Accounting", in Bradford, D. (ed.), Tax Policy and the Economy, Vol. 5, Cambridge Massachusetts, 55-110
2. Balassone F. and Franco, D. (2000a), Assessing Fiscal Sustainability: a Review of Methods with a View to EMU, in Banca d'Italia (2000).
3. _____(2000b), Public Investment, the Stability Pact and the Golden Rule, Fiscal studies, vol. 2, n. 21.
4. _____(2001), EMU Fiscal Rules: a New Answer to an Old Question?, in Banca d'Italia (2001).
5. Banca d'Italia, ed., (2000), Fiscal Sustainability, Rome.
6. _____, ed., (2001), Fiscal Rules, Rome.
7. Bastable, C.F. (1927), Public Finance, Macmillan, London.
8. Blanchard O. (1990), Suggestions for a New Set of Fiscal Indicators, OECD working paper n. 79.
9. Blanchard, O., Chouraqui, J.C., Hagemann, R.P. and Sartor, N. (1990), The Sustainability of Fiscal Policy: New Answers to Old Questions, OECD Economic Studies, n. 15.
10. Blejer, M.I. and Cheasty, A. (1991), The Measurement of Fiscal Deficits: Analytical and Methodological Issues, Journal of Economic Literature, vol. 29, n. 4.
11. _____, ed., (1993) How to Measure the Fiscal Deficit, Analitycal and Methodological Issues, IMF, Washington DC.
12. Boskin, M. J. (1982), Federal Government Deficit: some Myths and Realities, American Economic Review, Vol. 72, No. 2, 296-303.
13. Brunila, A., Buti, M. and Franco, D., ed., (2002), The Stability and Growth Pact – The Fiscal Architecture of EMU, Palgrave, Basingstoke.
14. Buiter W.H. (1983), Measurement of the Public Sector Deficit and Its implication for Policy Evaluation and Design, IMF Staff Papers, vol. 30, n. 2.
15. _____(1985), A Guide to Public Sector Debt and Deficits, Economic Policy, n. 1.
16. _____(1995), "What do Generational accounts tell Us about the Effects of the Budget on Intergenerational distribution and Saving Behaviour?", in Conference Paper, S. 111, Centre for Economic performance, Seminar, Cambridge.
17. Buti, M. and Sapir, A. (1998), Economic Policy in EMU – A Study by the European Commission Services, Claredon Press, Oxford.
18. Cangiano, M. (1996), Accountability and Transparency in the Public Sector: The New Zealand Experience, IMF Working Paper, n. 96/122.
19. Castellino, O. (1985), C'è un secondo debito pubblico (più grande del primo)?, Moneta e credito, n. 149.
20. Clarke, P. (1998), Keynes, Buchanan and the Balanced Budget doctrine, in J. Maloney (1998), Debt and Deficits, Cheltenham, Edward Elgar.
21. Commonwealth of Australia (1999), Fiscal Policy under Accrual Budgeting – Information Paper, Canberra.
22. _____ (2002a), Budget Strategy and Outlook 2002-03, Canberra.
23. _____ (2002b), Intergenerational Report 2002-03, Canberra.
24. Domar, E.D. (1944), The Burden of the Debt and the National Income, American Economic Review, December.

25. Economic Policy Committee (2001), Budgetary challenges posed by ageing populations: the impact on public spending on pensions, health and long-term care for the elderly and possible indicators of the long-term sustainability of public finances, Bruxelles.
26. _____ (2003), The impact of ageing populations on public finances: overview of analysis carried out at EU level and proposals for a future work programme, Bruxelles.
27. Eisner, R. (1984), Which Budget Deficit? Some Issues of Measurement and Their Implications, American Economic Review, Vol. 74, No. 2, 138-143.
28. European Commission (2003), Public Finances in EMU, European Economy, 3.
29. Eurostat (1979), European System of Accounts, Luxembourg.
30. _____ (1995), European System of Accounts, Luxembourg.
31. _____ (2000), ESA Manual on Deficit and Debt, Luxembourg.
32. Franco, D. (1995), Pension Liabilities - Their Use and Misuse in the Assessment of Fiscal Policies, Economic Papers, European Commission, N. 110.
33. Franco and Marino (2004), The role of long-term fiscal projections, Workshop on long-term fiscal projections, 12-13 February 2004 - Seville
34. Goodhart, C.A.E. (1984), Monetary Theory and Practice: the UK experience, MacMillan, London.
35. Hoffman, J. (1993), The Remaking of Europe – Employment and the Hidden Debt, CS First Boston.
36. IMF (1993), World Economic Outlook, October, Washington.
37. ____ (1996), World Economic Outlook, May, Washington
38. IMF (2001), Manual on Fiscal Transparency, Washington.
39. Kopits, G. (2001), Fiscal Rules: Useful Policy Framework or Unnecessary Ornament?, in Banca d'Italia (2001).
40. Kopits, G. and Craig, J. (1998), Transparency in Government Operations, IMF Occasional Paper, n. 162.
41. Kopits, G. and Symansky, S. (1998), Fiscal Policy Rules, IMF Occasional Paper, n. 158.
42. Kotlikoff, L.J. (1984), Economic Impact of Deficit financing, Staff Papers, International Monetary Fund, vol. 33.
43. Mackenzie, G.A. (1989), Are All Summary Indicators of the Stance of Fiscal Policy Misleading?, IMF Staff Papers, vol. 36, n. 4.
44. Malizia, R. (2000), Il nuovo conto delle amministrazioni pubbliche, mimeo, Istat, Rome.
45. New Zealand Treasury (1995), Fiscal Responsibility Act 1994: An Explanation, Wellington.
46. Peacock, A. and Shaw, G.K. (1981), The public sector borrowing requirement, Newnorth Artwork Ltd, Bedford.
47. Petersen, J. E. (2003), Changing Red to Black: Deficit Closing Alchemy, National Tax Journal, LVI, No. 3.
48. Robinson, M. (2002), Accrual Accounting and Australian Fiscal Policy, Fiscal Studies, vol. 23, No. 2, 287-300.
49. Towe, C.M. (1991), The budgetary Control and Fiscal Impact of Government Contingent Liabilities, IMF Staff Papers, vol. 38, n. 1.
50. Van den Noord, P. and Herd, R. (1993), Pension Liabilities in the Seven Major Economies, OECD, Economics Department Working Papers, n. 142.